

Answer Key

1A Chokepoint Descriptions

- Card 1 Strait of Gibraltar
- Card 2 Strait of Magellan
- Card 3 Strait of Malacca
- Card 4 Bosphorus and the Dardanelles
- Card 5 Bab el Mandeb
- Card 6 Strait of Hormuz
- Card 7 Panama Canal
- Card 8 Suez Canal

1B Appleton

1. Red Delicious' climate is affected by latitude, a warm ocean current, and its position on the east coast.
2. Granny Smith's climate type is influenced by latitude, position on the continent, and location on the leeward side of the mountains.
3. The warm ocean current is located off of the east coast of the continent between 0 and 30 degrees north.
4. The cold ocean current is located off of the west coast of the continent between 30 and 60 degrees north.
5. Leaftown's climate is influenced by latitude, a cold ocean current, and its position on the west coast.
6. Red Delicious' climate type is tropical wet because of its location at the Equator.
7. Stemsville's climate is probably subarctic, because of its location south of the Arctic Circle located at 66° 30 N. Students might also suggest subpolar which is a good alternative for that latitude.
8. Vegetation at Leaftown would most likely be taiga or a needle leaf forest.
9. Edgetown would be a Mediterranean or dry summer subtropical climate because of its location on the west side of a continent between 30 and 40 degrees.
10. The place most likely to be a desert is Granny Smith because of its location on the leeward side of the mountains.
11. Southtown's climate is probably humid subtropical. It is located near 30° S and close to the east coast of a continent.
12. The place with the most continentality is Jonathan because of its inland location.
13. The place most likely to have the warmest summers is Red Delicious. Although both MacIntosh and Red Delicious are located at the equator, there is a warm ocean current off the coast of Red Delicious. That ocean current would serve to have a warming effect on the climate of the area.
14. Golden Delicious is a marine west coast climate, because of its location on the west coast of a continent and between 40 and 50 degrees of latitude.

1C Clyde's Story

A	hot	K	rainy	U	desert
B	rains	L	mediterranean	V	icebergs
C	tropical wet	M	mud slides	W	glacier
D	rainforest	N	chaparral	X	treeless
E	tropical wet and dry	O	olives	Y	tundra
F	savanna	P	marine	Z	permafrost
G	dry	Q	mild	AA	taiga
H	humid subtropical	R	evenly	BB	plain
I	humid continental	S	desert	CC	steppe
J	January	T	leeward		

1D Economia

1. No, resources are not evenly distributed. Throughout the place, some have many listed and others have few.
2. None are showing the renewable resources of air, water, and soil. Although it could be inferred that countries E and F which are primarily agricultural have renewable resources.
3. Countries A, B, C, D have non-renewable metallic resources.
4. Country C has all three fossil fuels.
5. All countries have primary economic activity. Agriculture in Countries E and F, and resources extraction in Countries A, B, C, and D.
6. Country D has mineral resources that could be transformed to other products through secondary economic activity. Country B could manufacture jewelry with their precious stones and metals.
7. Countries E and F have food resources, so it is likely other countries will trade with them. Country C has energy resources which may be sought after.
8. Country E is most likely to have subsistence farmers because of the concentration on food crops.
9. Country D is likely to have a steel mill because they possess iron ore and are in a position to import coal from neighboring country C.
10. Country B with its precious metals and stone is most likely to have tertiary economic activity.
11. Countries A, B, and C could have trade surpluses because they have items in demand on the world market. Their resources are not distributed throughout the world.
12. Country F would be dependent on foreign trade because of their cultivation of cash crops.
13. Country E is most likely to have a trade deficit because they have only low value goods for the market.

1E Atlas Analysis

Part I: This and That

1. An atlas is a collection of maps. Geographers use atlases and maps to display data in a spatial context.
2. World's largest lake is the Caspian Sea located in Asia and Europe (Eurasia).
3. Africa, Antarctica, and Australia show their highest peaks lower than 20,000. (odd that Indonesia is included as part of Australia and the Pacific World)
4. Antarctica has 0 population because people living on the research stations are not permanent residents.
5. South America does not have many large lakes.

Part II: Southern Ocean and Antarctica

1. The Southern Ocean surrounds Antarctica.
2. 60° S is the northern border of the Southern Ocean.
1. Line marks the extent of claims for the Antarctic Treaty.
2. The map legend has items not visible on the map.

Part III: All About Maps

1. Both cite reference numbers in the atlas for their entries. Glossary defines terms and the index of places identifies location.
2. The index includes references to countries, cities, rivers, mountains, islands etc.
3. From the coordinates one can tell Armenia is in the eastern and northern hemispheres.
4. The map on p. 92 has a better view of Armenia than the one on p. 78.
5. Scale on page 78 is 1 inch = 585 miles, the scale on pg. 92 is 1 inch = 322 miles. FYI the map on p. 92 is a large-scale map showing a smaller area. Even though the number appears smaller as a fraction is larger 1/585 compared to 1/322.
6. Capital of Armenia is Yerevan. Shown with a star indicating national capital. Symbol included in the legend.

7. Armenia is bordered by Azerbaijan to the east and west. Georgia to the north, Turkey to the west, and Iran to the south.
8. Continental boundary symbol shows Armenia on the Asian side.
9. The following symbols are used
 - a. country name--all caps and boldfaced
 - b. large and small cities—sentence case in black with larger type indicating more populous cities
 - c. bodies of water—italics and blue, type size varies for size of body of water. Type face is serif, Times New Roman
 - d. names of continents—all capital letters, letters hollow
 - e. deserts—italics, Times New Roman, black
 - f. mountain ranges—italics, Times New Roman, black

Part IV: Interpreting Thematic Maps

1. Africa is in all four hemispheres, northern, southern, eastern, and western
2. Countries that are not on the continent are shown in a beige color.
3. Tropic of Cancer.
4. Mali, Mauritania, Egypt. Western Sahara is not a country.
5. No. Uses (adm. Morocco to indicate “ownership.” Map on page 66 labels it as the only country in Africa today designated as a territory.
6. The yellows between 1,000 to 5,000 ft
7. The longer the growing season the more the rainfall.
8. Predominant land use is subsistence farming.
9. Growing season and precipitation
10. Land Cover map shows vegetation and dry lands.
11. The land cover and elevation maps use similar color ramps. The elevation map colors are not an indication of vegetation or areas hospitable to human habitation.
12. Desert and semiarid lands sparsely populated. People clustered along the coasts and sources of water, especially the Nile.
13. Urban areas on Land Use map shows urban areas with concentrations of people corresponding to population map.
14. Most urbanized countries: Nigeria, Morocco, South Africa, and Egypt have large areas of urban.
15. Thematic maps emphasis the attribute and lettering for places would clutter the map.

Part V: Prove or Disprove

1. Disprove, Congo Basin is around 1,000 ft. highest areas on continent are around 10,000.
2. Disprove, Land Cover map definitely indicates tropical rainforest for the Congo Basin.
3. Prove, Political Relief map.
4. Prove, map and data comparing the contiguous U.S. land area and the extent of the Sahara.
5. Prove. Precipitation map,
6. Prove, spatial association between the growing season map and the land use map.
7. Disprove, land use map showing ranching as a relatively sparsely distributed activity. Largest area is near the Sahel
8. Disprove, most urban areas are along the coast or a river, not in the interior.
9. Disprove, graphic on p. 67 shows one country with 73% urban and another at 17%. Current estimates for Africa are 40% urban.
10. Disprove, the Focus on Independence in Africa shows most African countries colonial possessions in 1945,

11. Both Africa and Australia have large deserts in the interior. Both have urban areas located along the coast. Africa's major land use is subsistence farming whereas Australia's is ranching.

1F Climograph Analysis

- Auckland in the southern hemisphere.
- Closest to the equator, Timbuktu because temperatures are high throughout the year.
- Temperatures below freezing only in Yuzno Sakhalinsk.
- Definite wet and dry seasons in New Delhi and Timbuktu.
- Raining evenly distributed in Auckland and sort of in Yuzhno Sakhalinsk.

Different scales are used because precipitation is much smaller numbers than temperature.

1G Development Card Sort

Master has the items in order

2A Would it be a good idea? (*United States and Canada edition*)

Answers will vary. Accept all plausible explanations. Evaluate the quality and accuracy of students' presentation of evidence to support their decision.

Considerations

1. The distance across the Hudson Bay is considerable. What would be the places that would be connected?
2. The St. Lawrence River is connected to Lake Ontario via the St. Lawrence Seaway that was opened in 1959. The link provided access from ocean going ships to the Great Lakes.
3. Baffin Island is located within the Nunavut Territory, but it is in a remote location accessible only by sea.
4. How would centrality be defined? The center of distance across an area or the middle of the population distribution.
5. What would be the advantage of moving the capital in the days of instantaneous communication?
6. With global warming, a northern sea route would open. But the Arctic is not really near major population and economic centers. Also land travel would be difficult because of all the islands and tundra in the area. (Land Cover Map, atlas)
7. What is the climate and average temperature in the Yukon? Is it suitable for growing crops? Climate map, text p. 79
8. What is the value of the Hudson Strait? What two bodies of water does it connect? How would filling it in affect travel routes? Is the land there suitable for growing crops?
9. Land use map shows commercial farming. Is the climate one suitable for growing wheat? Wheat thrives in relatively dry lands and what is the average precipitation in the Nova Scotia area?
10. Is Winnipeg directly across Lake Erie from Cleveland? What is the distance across Lake Erie?
11. Does Birmingham have coal and iron ore resources needed to produce steel? (Energy Resources map, p. 47, Major Highways, p. 48, Population Density, p. 49)
12. Does North Dakota grow corn? (See Corn map, atlas p. 48)
13. Are there oil deposits in Illinois? (Energy Resources map, p. 49)
14. Is Duluth connected to a major highway system? See (Major Highways, p. 48)
15. 280 days would equal about 9 months? Is the growing season around Omaha in the 8 – 12-month category. (Growing Season map, p. 30.)
16. Examine the water resources in Tennessee near Knoxville. Yes, the nuclear reactor in Oak Ridge produced fuel for the atomic bombs developed during World War II.

17. Lettuce requires much water to grow. Where is Moab? What is the annual precipitation at that location? (Precipitation, p. 44) How long is the growing season? Is it irrigated land? (Irrigated Land, atlas, p. 46)
18. Does Baton Rouge have coal deposits nearby? (Energy Resources, p. 47)
19. Does Twin Falls, Idaho have 10,000 workers. (Population map, p. 49)
20. Students should evaluate the route of the Colorado River and its sources of water. Does the river flow through arid lands? What is the effect of dams on water distribution downstream? Is there a dam on the Colorado River? Yes, Hoover dam and many others. What is its purpose? (Hoover dam addressed, p. 83 of text)

2B Describing Locations

1. Montreal, Canada
 2. Richmond, Virginia
 3. Buffalo, New York
 4. Toledo, Ohio
 5. New Orleans, Louisiana
 6. Virginia Beach, Virginia
 7. Norfolk, Virginia
 8. Pittsburgh, Pennsylvania
 9. Cleveland, Ohio
 10. Minneapolis, Minnesota
- Located along the northern shore of the St. Marys River which connects Lake Superior to Lake Huron
 - Located on the western shore of Lake Michigan where the Chicago River flows into the lake.
 - Located near the confluence of the Kansas and Missouri rivers.
 - Located where the Fraser river flows into the Strait of Georgia.
 - Located near the confluence of the Willamette and Columbia rivers.
 - Located where the San Francisco River flows into Pacific Ocean.
 - Located at the confluence of the Missouri and Mississippi rivers.
 - Located near the confluence of the Floyd and Missouri rivers.

Confluence sites can use the rivers to serve a wide geographic area.

3A Demographic Data booklet

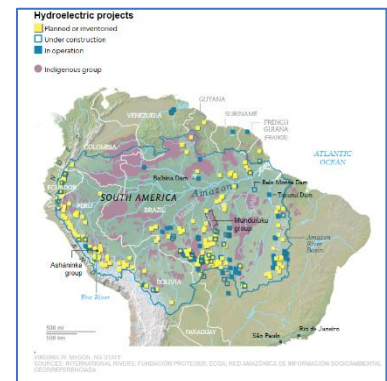
Evaluate demographic booklets for the required number of graphics, information contained on the cover, accuracy of information, and response to the generalizations.

3B Would it be a good idea? (*Latin American edition*)

Answers will vary. Accept all plausible explanations. Evaluate the quality and accuracy of students' presentation of evidence to support their decision.

1. Is citrus included as one of the crops on the map of Puerto Rico's Economic Resources, p. 159?
2. Tropical location in Cuba is ideal. Are there restrictions on economic activity in Cuba by their government? Students may know if the United States restricts travel to Cuba. Can also check the tourist receipt table on p. 165, is Cuba listed?
3. What is the land use of Costa Ricas's northern coast? Central American Land Use map, p. 160.
4. Does Nicaragua border both the Caribbean Sea and the Pacific Ocean? What is the distance across the country where a canal would be constructed? Political map, p. 140.
5. Has Haiti experienced natural disasters such as earthquakes and hurricanes? Section 2.2 Challenges in Haiti, tion pp. 172-173.

6. Consult a map. Is Panama in a position to connect the Caribbean Sea with the Atlantic Ocean?
7. Brasilia is in the interior of the country distant from other population centers. Population Density map, p. 193, climate map, p. 191, Land Use map, atlas p. 60, Amazon Rain Forest, atlas p. 59.
8. Where is the Amazon Basin, map, pp., 194-195? What areas would the road connect and what would be the environmental costs? There is a highway shown to the right. Was it a good idea? Not quite all paved. Was planned to run through breaks in the rain forest. Has made it easier for loggers to transport trees out of the rain forest. What is the potential for environmental damage to the rainforest?
9. Where is Tierra del Fuego? Is the climate there suitable for growing grapes?
10. Where are the *llanos*? Textbook description, p. 191. Crops are shown on Resources map; p. 193; Climate map, p. 191. Corn requires adequate moisture to grow. Do the *llanos* provide that?
11. Are there petroleum resources around Lake Maracaibo? Resources map, p. 193.
12. What crops grow in the *tierra fria*? Chart, p. 193.
13. Does Ecuador have oil? What are the consequences of building an oil pipeline to both the environment and indigenous people? Is Ecuador a member of OPEC? Resources, p. 193.
14. Where is Bolivia located on the continent? Does Bolivia have a need for a navy? Strange but true, Bolivia has a navy with 4 boats kept in Lake Titicaca. Boats are used to patrol their rivers to control smugglers and drug traffickers.
15. The seasons in South America are reversed. Does Chile have some dry summer climate areas? Does Chile have commercial farming? (Land Use map, atlas p 81) Section 2.3 Chile's Food Production, p. 226.
16. Are there dams on the Amazon River? Yes, see map to right. Have students think of negative consequences to river life, the environment, and indigenous lands.
17. Length of growing season?
18. Were the Inca the predominant indigenous group in Venezuela? Inca Empire, c. 1520 for countries involved in the Inca Empire.
19. What is the major language of Brazil? Would there be a need to publish books in Spanish?
20. According to the Indigenous Populations of South America p. 217, which country have the highest percentage of indigenous people? What does a percentage of indigenous people today indicate? Colombia has one of the lowest percentages of indigenous people. Does this represent a dramatic decline or the lack on indigenous groups when the area was settled? Examine the map of Indigenous Languages on p.218 for further information.
21. Do the gauchos work on the pampas of Argentina? Is the infrastructure in the country sufficient to support tourists?
22. Where does leather come from? Are cattle a major crop of Uruguay? Consult the Resources map, p. 193.
23. Does Bolivia have copper?
24. What type of climate is there in southern Argentina? See the Population Density map p. 193 to see current contribution distribution.
25. See 3.1, Brazil's Growing Economy to read about ethanol production in Brazil? What are the consequences of using grains to produce fuel instead of food?



3C Geomorphology Analysis

Answers will vary. Evaluate answers based on the use of geographic data to support the answers.

3D Carlos's Story

Question	Answer	Geographic Skill/Content
A	Bolivia	reading a political map, capitals
B	Colombia	identifying economic activities, cultural literacy
C	tierra templada	reading a diagram, vertical zonation
D	tierra caliente	reading a diagram, vertical zonation
E	Honduras	reading a political map, capitals
F	El Salvador	linking events to places
G	tropical	identifying climates
H	Mexico City	identifying major population centers
I	14 million	reading a population table
J	Cuba	identifying form of government
K	western	identifying hemispheres
L	Greater	identifying physical features
M	Hispaniola	identifying relative location
N	Jamaica	reading a resource map
O	Ecuador or Venezuela	identifying resources
P	or Mexico	
Q	pampas	identifying vegetation zones
R	Argentina	identifying political boundaries
S	Falkland	identifying differing names
T	Pacific	locating places
U	Colon	locating places
V	Peru	reading a land use map
W	Ecuador	reading a land use map
X	Colombia	reading a land use map
Y	Nicaragua	reading a land use map; subregions
Z	French Guiana	reading a political map

4A Testing Generalizations

Accept other plausible answers.

1. Disprove, Europe has many countries with small land areas. (map analysis)
2. Disprove, the UK is located on the western side of Europe, not in the center.
3. Prove, there are many peninsulas in Europe (Iberian, Italian, Jutland, Scandinavian) and Europe could be considered a peninsula of Eurasia. (subheading, p. 247)
4. Disprove, Europe 's major climate zone is Mediterranean (map, p. 247)
5. Disprove, Greece is located in southern Europe where it is warmer and has a Mediterranean climate (map, p. 247)
6. Prove, trade p. 248 and rivers and plains, p. 250.
7. Prove, (map, p. 2470, students will have to link name with climate chart,
8. Disprove, polders are in the Netherlands, not Norway, p. 248.
9. Disprove, students can cite any environmental modifications.
10. Disprove, Prove mountain chains p. 250 and extensive plains p. 251.
11. Disprove, fjords defined p. 249 and comparison to population density map.
12. Prove, p. 252 "the fertile soil on the plain makes it ideal for growing crops."

13. Prove, Land Use and Natural Resources Map, p. 251.
14. Disprove, picture spread on pp. 254-55.
15. Disprove, atlas Land Cover map.
16. Prove, Land Use and Natural Resources Map, p. 251.
17. Prove, Democracy in Athens, p. 256 and Rome's legacy p. 262
18. Prove, Establishing Colonies subheading, p. 269
19. Prove, language map
20. Prove, City Life subheading, p. 285
21. Prove, data needed from other sources
22. Prove, population distribution map, atlas.
23. Prove, many pictures showing art and architecture
24. European Union map, p. 293
25. Prove, map, p. 300, major religions map, p. 61.

5A Comparing Countries Semantic Feature Analysis

0 (does not have); **+** (has); **—** (information not found)

Country	Deserts	Mountains	Landlocked	Oil Resources	Oil Pipeline
Armenia	0	+	+	0	0
Azerbaijan	0	+	+	+	+
Georgia	0	+	+	0	+
Kazakhstan	+	0	+	0	+
Kyrgyzstan	0	+	+	0	0
Tajikistan	0	+	+	0	0
Turkmenistan	+	0	+	0	+
Uzbekistan	+	0	+	0	+

0 (does not have); **+** (has); **—** (information not found)

Country	Christian	Muslim	Iranian-based language	Turkic-based language
Armenia	+	0	0	0
Azerbaijan	0	+	0	+
Georgia	+	0	0	0
Kazakhstan	0	+	0	+
Kyrgyzstan	0	+	0	+
Tajikistan	0	+	+	0
Turkmenistan	0	+	0	+
Uzbekistan	0	+	0	+

5B Would it be a good idea? (Russian edition)

Answers will vary. Accept all plausible explanations. Evaluate the quality and accuracy of students' presentation of evidence to support their decision.

Considerations

1. In the past, the Arctic Ocean is frozen much of the year limiting ports built along its shore. As the Arctic ice melts access to the sea and a northern passage would be feasible. However, to what extent do other modes of transportation connect to the ports?

2. What is the climate of Verkhoyansk? See Climate Regions, p. 313. Is that climate suitable for human settlement?
3. What are the characteristics of permafrost? Permafrost is defined in 1.2, Land of Extreme Climates, p. 312.
4. Where are Russia's oil fields? Who are the major buyers of Russian oil? Is the Caspian Sea located between those two locations? Is there already a pipeline around the sea? What would be the advantages and disadvantages of building a pipeline across a body of water. Oil and Natural Gas Pipelines, p. 345.
5. Cotton is a major product of Uzbekistan and Turkmenistan. Read about cotton growing in the context of water diversion from the Arab Sea, p.318.
6. Is the climate suitable for skiing near Vladivostok? How long would it take to commute from the major population centers?
7. Are iron and ore deposits available east of the Ural Mountains? See Natural Resources map, p. 315. How does the supply of labor differ on either side of the mountains?
8. The reversal of river flow was an idea that was seriously considered. What would be the advantages of having the rivers flow southward instead of northward. Consider the issue involved when the mouth of the river is frozen as further upstream snowmelt and rains occur in early spring.
9. Section 1.5 Central Asian Landscapes p. 319, depicts the shrinkage of the Aral Sea. Have students evaluate whether or not a chemical plant on an island within the sea would have been feasible and generate possible consequences of such an undertaking. A biological weapons test site, Vozrozhdeniye Island was established on an island in the Aral Sea. It was abandoned in 1992.
10. Is the climate in Kazakhstan suitable for growing wheat? Section 1.1 Climate and Culture, p. 334.
11. Are there sufficient fish in the Aral Sea to support a processing plant? See Section 1.5 Central Asian Landscapes to read about the pollution in the seabed. If it was flooded would it be a good place to raise fish?
12. Where is most of the population of the Russian Federation located. See the Population Density map, p. 11.
13. What is the relative location of both cities? Why do you think the capital was moved?
14. The Trans-Siberian railroad traces along the southern part of the country. What would be the advantages of a northerly route? Check the Climate Region, p. 313 and examine the climate along the route. Are there sufficient people along the route to generate ridership?
15. Are there oil deposits in Azerbaijan? Check the Resources and Industries in Western Russia in 1900, p. 327.
16. Although the air may be cleaner with the change in fuels, examine Section 2.4 After Chernobyl, p. 346 – 347. How did the design of the plant affect its impact on the environment?
17. On what type of topography is the Baikonur Cosmodrome space center located? How does that differ from that of Tajikistan? Would it be a good idea to launch rockets from a mountainous area? Should the site be located near a heavily populated area?
18. The Black Sea is suitable for warm water ports. How accessible is it to the world's oceans? Which route would be submarines take to enter the ocean? How shallow is the Mediterranean?
19. Would it be a good idea to dispose of nuclear waste in the Arctic Ocean? What would happen if the containers leaked? Has this already been done?
20. How wide is Lake Baikal? Is there enough population to justify a bridge across rather than roads around?

6A Would it be a good idea? (North Africa/Southwest Asia edition)

Answers will vary. Accept all plausible explanations. Evaluate the quality and accuracy of students' presentation of evidence to support their decision.

Considerations

1. Does southern Egypt contain oil resources?
2. The name of this body of water is disputed.
3. The major oil fields map in the Nystrom Atlas, p. 93 shows no known deposits in southern Egypt.

4. Algeria has the longest border with the Sahara, so it would potentially be the most expensive to construct? What would be the purpose of the sand fencing?
5. Relies on knowledge of the definition of a nomad and the need to cross international borders in a dry world to support their flocks. How would governments view temporary visitors in remote areas?
6. Given the set of facts, students need to form a hypothesis as to the soundness of creating a larger political unit in this region. The idea. This was a short-lived idea with Egypt and Syria acting as the United Arab Republic between 1958 and 1971. They also had a loose association with Yemen. Student answers should reflect the distance between the two countries as being a barrier to creating a cohesive political unit, especially coordinating with Yemen.
7. The Strait of Hormuz is a strategic location for the shipment of oil. What would travel across the bridge? Would it be high enough to permit the passage of oil tankers? Note it was one of the chokepoints identified in the first unit's learning activities.
8. The Nystrom atlas, p. 93 contains a list of OPEC members and a diagram showing Russia as a leading oil producer. What would be the positive and negative consequences of Russia joining the group?
9. The Nile River Valley map on p. 431 shows the deserts bordering the Nile. The satellite image shows the concentration of the country's population along the Nile. Into which type of environment would the people move using the 250-mile resettlement areas?
10. Mecca is Muslim pilgrimage destination. Non-Muslims are forbidden to enter the city of Mecca. What are the chances that a luxury resort would be built and attract foreign visitors?
11. Have students consider unifying characteristics of the Sudan and compare them with the factors that make North Africa and Southwest Asia a region. Factors could include dry climates, predominance of the Arabic language and Islam as well as oil resources. Which of those characteristics does the Sudan contain? Remember that regions form and change. Some textbooks have included the Sudan because of its Muslim majority.
12. Increasing the capacity of Lake Ataturk would decrease the flow of the Euphrates to the countries downstream. How would Iraq view this action?
13. The Rub al Khali is known as the empty quarter. The text states on p. 418, almost no one lives there. With its dry environment why invest in water supports on the international level? Is the infrastructure in the area developed enough to support international visitors?
14. The Anatolian and Iranian Plateaus map, p. 421, shows the tectonic plate boundaries within the region. What would be the effect of an earthquake due to plate slippage on an oil pipeline?
15. The Aswan High dam is mentioned in the text on p. 431. Benefits include flood control and hydroelectric power. The build up of silt behind the dam prevents the natural replenishment of the soil. The construction of the dam displaced residents and required the relocation of some ancient monuments. Do the benefits of the dam outweigh the costs?
16. The Bedouin, mentioned and pictured on p. 441, are a nomadic people. How would their chosen lifestyle view permanent settlement in government housing?
17. The map on p. 446 shows one of the islands created in Dubai. What are the possible effects on the environment?
18. To what extent does Afghanistan fit the unifying characteristics of the region?
19. Water desalination plants are expensive. Is Yemen able to repay the costs of both constructing and operation the plant?
20. Answering this question requires some outside information. Both countries would need to use irrigation to support crops. Desert soils are inherently fertile because the lack of rain does not leach the minerals out. Kuwait has 8.5% of its land used for agriculture and 0.6% arable land. Irrigated land is 105 sq. km. Bahrain has 11.3% of its land used for agriculture (arable land 2.1%) with 40 sq. km irrigated. (Data obtained

from the CIA World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/>). Which has the more potential for development?

7A Creating Choropleth Maps

Student answers will vary based on the data in the maps they created.

7B Analyzing Migration Factors

Answers will vary. Accept all plausible explanations. Focus assessment on the correct identification of social, economic, political, and environmental categorization.

8A Monsoon Asia Climographs

- The most dramatic effect of the monsoons is in Mumbai.
- The temperature drops when rainfall is high because of the cloud cover that prevents insolation.
- New Delhi receives less rainfall because it is further away from the coast.
- Mumbai (Bombay) receives more rainfall because it is in the direct path of the monsoon winds and receives a direct hit when the monsoon winds move on shore.
- The success of agriculture in India is dependent on the arrival of the monsoon and the rain it brings.

8B Would it be a good idea? (South Asia)

Answers will vary. Accept all plausible explanations. Evaluate the quality and accuracy of students' presentation of evidence to support their decision.

Considerations

1. A dam in this location would back the river up creating even more flooding.
2. Land Use and Natural Resource map, p. 477 shows no oil deposits in this area.
3. Sri Lanka has relatively low elevation with its tallest mountains less than 8,000. There are more mountainous countries in the region.
4. According to the Winter Monsoon map pt. 475, Mumbai only receives under 5 inches of rain in the winter season.
5. Section 1.4 mentions the Green Revolution which is associated with new seeds, although the word hybrid is not used. The question is whether subsistence farmers would be able to afford the seeds.
6. The Land Use and Natural Resources map, p. 477 does not indicate forest in Pakistan.
7. According to Land Use and Natural Resources map, p. 477, Bangladesh does not have coal.
8. India has both coal and iron ore the major ingredients for making steel. In 2018, India became the second largest steel producer in the world, replacing Japan.
9. The South Asia's Religions map, p. 487 shows other religious groups within India. Even though Muslims may only be 14.2% of the population the number among 1,296,834,042 is large, 184 thousand. So better to adopt a policy of religious toleration.
10. The borders were abandoned in 1971 after a 9-month war of liberation. The book references partition on pp. 488.
11. Kashmir is a disputed area with land claimed by China, Indian, and Pakistan. Located in a remote mountainous area complicates settlements. If the UN were to unilaterally declare borders, the wishes of the people living in the area would be ignored. Conflict over Kashmir map and explanation, p. 489.
12. The location in Chennai is immaterial. See the chart of changes of average farm size in India over time, p. 492.
13. Millions of Hindus visit Varanasi, the headwaters of the Ganges. Do more need to be attracted to that location.

14. Both locations have movie companies, the one in Chennai specializes in Tamil-language films. How would that fact affect the decision Popular Culture feature, p. 503?
15. The Comparison of Selection Consumer Goods, South Asia and the United States, p. 507, details the number of televisions per 1,000 in the region. Nepal has the lowest numbers.
16. The Comparison of Selection Consumer Goods, South Asia and the United States, p. 507, shows the most cars in India. Most of the cars manufacturers in India are based in Chennai.
17. India's Highways and the Gold Quadrilateral map, p. 509 shows the location of the cities and the lack of a highway connecting them. Students need to generate reasons why roads connect places.
18. Students should consider the reasons why people migrate to cities in this region of the world. Pakistan is trying this method. See p. 511. But students need to evaluate whether the solution will address the problem.
19. Garments are Bangladesh's top export, p. 515. Would an increase in factories make Bangladesh more competitive in the world garment production industry?
20. According to the Languages of South Asia map, p. 516, the major language of Bhutan is Tibeto-Burman. Would the people need assistance with the Dravidian language, predominant in southern India? How does Bhutan's relatively isolated location influence interaction?
21. What characteristics does Afghanistan share with this region that could help determine whether or not it should be included?

9A Demographic Dilemmas

Explanation of Possible Answers

1. Country most likely to participate in foreign investment opportunities. (Singapore, Brunei)
Criteria
 - countries with high per capita GDP would be most likely to have citizens with income to use for investments
 - countries with "valuable" resources tend to have a greater chance of having high per capita GDPs
2. Country with the best market for umbrella sales. (Indonesia)
Criteria
 - amount of rainfall, maps of monsoon wind patterns, and total precipitation
 - large population, the greater the potential for sales
 - high per capita GDP probably not a major factor because umbrellas are not a luxury item
3. Country with the best port for international shipping. (Singapore)
Criteria
 - location along an international trade route such as the Strait of Malacca
 - economic activity in the tertiary sector
4. Country with the best market for copies of the Qur'an. (Indonesia)
Criteria
 - large percentage of Islamic believers
 - largest population
5. Country most likely to experience a civil war. (Myanmar, Laos)
Criteria
 - diversity in ethnic groups—major group and small minorities
 - diversity in religion
 - low per capita GDP, economic unrest could fuel ethnic violence
 - history of ethnic rivalry
6. Most ethnically diverse country. (Indonesia, Burma)
Criteria
 - largest number of ethnic groups

- variety of languages

7. Country with the longest period of independence. (Thailand)

Criteria

- map of colonial possessions in Southeast Asia, Thailand was never a colony

8. Most economically advanced country. (Singapore)

Criteria

- highest per capita GDP
- smallest percentage of people engaged in agriculture
- production of exports with the highest value
- highest life expectancy
- lowest infant mortality

9. Most agriculturally advanced country. (Thailand)

Criteria

- low percentage of people engaged in agriculture
- ability to produce food through technology
- arable land
- ability to produce food for export

10. Country with the highest percentage of subsistence farmers. (Laos, Cambodia)

Criteria

- high percentage of people engaged in agriculture
- low percentage of arable land
- low percent urban

11. Most “educated” country. (Singapore)

Criteria

- high literacy rate
- low infant mortality
- high per capita GDP
- economic activity concentrated in the non-agricultural sector

12. Country that could benefit the most from Peace Corps medical assistance. (Cambodia)

Criteria

- low life expectancy
- high infant mortality rate
- low literacy rate

13. The least economically advanced country. (Cambodia, Laos)

Criteria

- low per capita GDP
- high percentage engaged in agriculture
- high infant mortality rate
- low literacy rate

NOTE:

The answers and criteria listed above provide only rough guidelines for this exercise. Accept different answers from students if they have logical reasons to support their answer choices. For example, Singapore would be a good candidate for the most agriculturally advanced country because of some criteria, but the 100% urban rate negates large scale agricultural endeavors

10A Semantic Feature Analysis

Assess the students on their ability to:

- distinguish between physical and cultural features,
- predict the associated East Asia country,
- use the text to validate answers.

11A Change Over Time in Nauru

- Over time the resources of Nauru were exhausted, and the landscape scarred.
- Mining for phosphates would not have been possible unless the birds visited the island and make deposits. The island location limits interaction with the world. Because agriculture is limited to coconuts most of the island's food is imported. There are few sources of fresh water, so desalination plants were constructed.
- Human actions created roads and an airport and mining pock marked the landscape. Vegetation was destroyed and native wildlife declined.

Possible solutions

The government was proactive in setting aside some of the profits for the future.

Suggestion	Pros	Cons
Tourist industry	Raise revenue	Pressure on scarce water resources
Fishing tours	Raise revenue	People are kept off of the island
Construct sea walls around the island to counter sea-level rise	Protect the coasts	Expensive Will the sea wall encourage further erosion?
Buy another island and relocate	People safe from flooding	Leaving the homeland
Tours of the island	Raise revenue	Not much to see, pressure on resources
Offshore banking operations	Create revenue	Money laundering is illegal in many countries
Sell passports	Create revenue, identities for foreigners to buy	Support of criminals changing their identity
Recognize break away countries such as Abkhazia and South Ossetia	Collect revenue from country that wants support	Recognition for money
Establish detention centers to house asylum seekers from immigrants to Australia as they await hearing	Raise revenue	Pressure on resources Costs involved with maintaining the detention centers Foreign people on the island

The last four solutions have been implemented and may account for the continued existence of Nauru.

11B Map Interpretation

1. Incorrect, Australia is located in the southern and eastern hemispheres.
2. Incorrect, Tasmania is located south of the state of Victoria.
3. Correct
4. Correct
5. Correct, see map p. 647
6. Correct
7. Incorrect, see Population Density map, p. 669. Most cities with large populations are on the east coast.

8. Incorrect, Australia has extensive deserts in the interior. Australia Physical map, p. 664 labels them, Great Victoria, Desert, Simpson Desert, Great Sandy Desert.
9. Incorrect, the Great Barrier Reef is located along the northeastern coast of Australia far from the Timor Sea.
10. Incorrect, New Zealand is not located right next to Australia within 50 miles. The distance from Canberra to Auckland is approximately 1,400 miles.
11. Correct
12. Correct, e.g., French Polynesia, which includes Tahiti
13. Incorrect, Guam is east of the Philippines, but north of the Federated States of Micronesia.
14. Incorrect, Hawaii and the Marshall Islands are on opposite sides of the IDL.
15. Correct, Guam, American Samoa, and other islands are territories of the United States
16. Correct
17. Incorrect, Nauru is an independent country.
18. Incorrect, New Zealand has three major islands, North Island, South Island and Stewart as well as many possessions throughout the region. The islands are labeled on the Geothermal Energy map, p. 683.
19. Correct, see map p. 683
20. Correct

12A Relative Location

1. Asia, Europe, and North America border the Arctic Ocean.
2. Russia
3. Arctic sea ice extends southward to 75° N.
4. South America
5. South America would cross the Drake Passage.
6. Marie Byrd Land is in the southern and western hemispheres.
7. The 180° line passes through the Ross Sea. Notice that it is opposite the prime meridian which divides east and west.
8. The Vinson Massif line is at 90° W which passes the western side of the South American continent.
9. Atlantic, Pacific, and Indian
10. Fiji, Tuvalu, and Kiribati
11. Queen Maude Land.
12. 60° S
13. 120°E, Australia
14. Indian Ocean, India